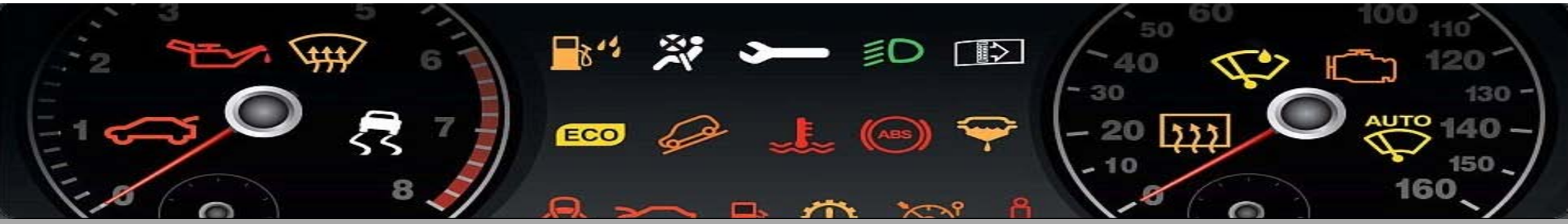
EGEA WG 2 meeting

20th February 2015- Brussels



Functioning of Euro 5 legislation – Follow-up to Ricardo-AEA study Report

Functioning of Euro 5 – RICARDO AEA study Report

- **Facts-findings of the Report**
- **Collection of suggestions**
- **Recommendations to the Commission**

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Functioning of Euro 5 – Findings

- **Economic / market context :**

  "The increase in on-board electronics means that diagnostic tools are needed for the majority of vehicle repair and maintenance works."

- **Challenges related to access to technical information :**

  A) "Relevant information (such as communication protocol information, test and diagnosis procedures etc.) must be obtained to produce multi-brand tools".

  B) "Tool and equipment manufacturers usually prefer to obtain information by reverse engineering rather than direct licensing agreements with OEMs."

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Functioning of Euro 5 – Findings

- **<u>Why</u> ?**

  Because of several key issues in obtaining the required information from OEMs, such as:

  - ❖ Price of access (often too high, especially for multi-brand tools);
  - ❖ Contractual clauses (territorial clauses and/or termination clauses);
  - ❖ Format of the information provided (different OEMs formats, requiring standardisation before it can be installed in multi-brand tools);
  - ❖ Delays and long timescales (6 to 12 months to reach contractual agreements with OEMs);
  - ❖ Suitability of standards.

- **Any other reason?**

Functioning of Euro 5 – Recommendations

Further guidance/clarification needed:

- Quality of OEM data (reliability, completeness, timeliness, functionality)
- Definition of ‘reasonable fees’ levels
- Format of data (processable, standardised)
- Guidance on mutually acceptable contract clauses/prices for publishers and tool producers

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Functioning of Euro 5 – Recommendations

Better enforcement

- Procedures for investigation of complaints and penalties for infringement to be better defined and harmonised across the EU
- Involvement of EU as compliance authority
- Separate verification body to check compliance and deal with complaints

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Collection of suggestions

- Do you think that the Ricardo AEA Report represents an accurate reflection of the problems affecting the tools manufacturers?
- Any concrete examples of the problems?
- What should be done in your opinion to tackle the problems highlighted in the Report?
- In particular, what actions would you suggest to take with regard to the issues affecting the tools manufacturers?

Proposals to the European Commission

- For discussion…

E-Call / Telematics

The Interoperable Platform for Telematics Mobility

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Explanation: data and information

Data

- Non-interpreted raw data (just numbers)
- Example
  - 22
  - 24

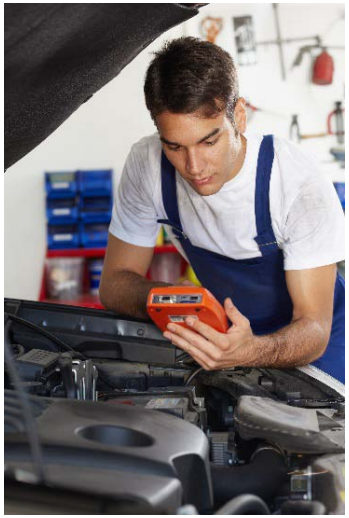
Information

- Raw data interpreted (made meaningful)
- Example

  22 = battery voltage good

  24 = battery voltage low

Euro 5 today – data access



Live data/vehicle status interpreted with the help of diagnostic tools

Standardised 16 PIN OBD connector (ISO 15031)

The 16 PIN OBD connector enshrined in ‘Euro 5’ provides today:

- Direct access to all in-vehicle data
- Thereby: access to real-time ECU data streams
- No cost to access in-vehicle data

= Independent ‘health status’ check of the vehicle

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Euro 5 today – information access

According to ‘Euro 5’ today:

- VM to provide web-based supporting RMI information to IOs
- Diagnostic information for tool manufacturers
- … all at a reasonable and proportionate fee

= **Independent repairer has choice between VM or independent providers**

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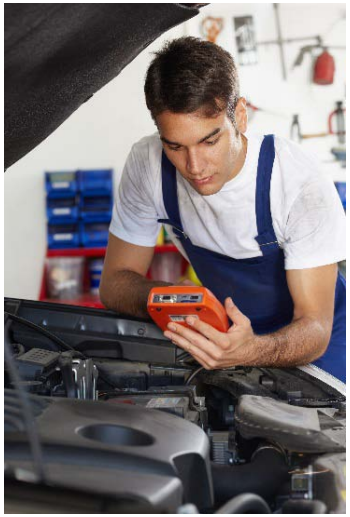
Euro 5 today – data and information



Diagnostic OBD connector referenced in Euro 5 <u>and</u> Euro 5 RMI <u>together</u> ensure today:

- Independent repair methods
- Independent tools
- Independent business models

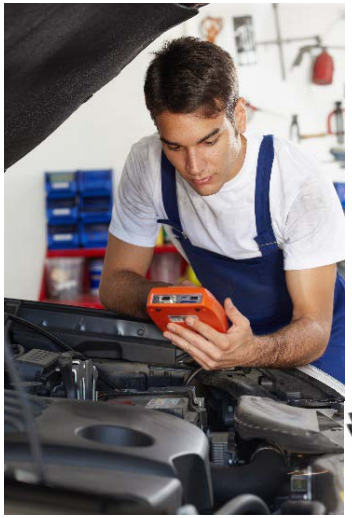
Entrepreneurship & competitive offers from the Aftermarket!

The IAM today

Key elements of today's Aftermarket:

- Direct access to real time in-vehicle data with no direct costs
- Unmonitored business activities/models from IOs by OEMs
- Consumer choice

Repair with telematics today



New telematics technology: new wireless transfer of data to a server

Standardised 16 PIN OBD connector: reduced importance

Increasing wireless transfer of data and information:

- With telematics technology, there are new possibilities to transfer in-vehicle data wirelessly.
- This is in principle good, and will benefit the consumer.
- The OBD connector route will become less relevant.

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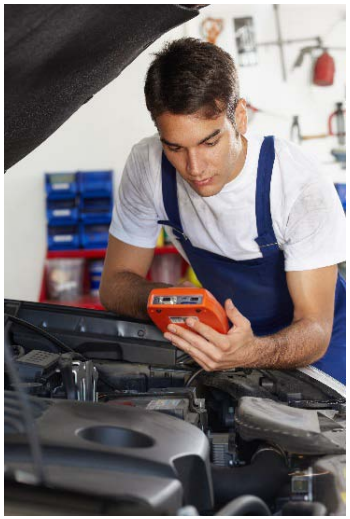
Repair with telematics today



Independents

Brickwall

Standardised 16 PIN OBD connector: reduced importance

examples

VM network

- Independent Aftermarket has no access to embedded telematics today
- Embedded telematics privileges VM with early information on vehicle status

This increasingly distorts the Aftermarket…
… and other sectors

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Key prerequisites for a competitive Aftermarket

1. Direct access to in-vehicle data

- Vital to support ‘high speed dependent’ communication (time-critical) applications.
- IOs cannot be restricted to VM defined data-sets and business models but must be able to directly access in-vehicle data to support their own application requirements.
- Only direct access to real-time in-vehicle data supports
  the creation of innovative services and products.

Key prerequisites for a competitive Aftermarket

2. Non-monitoring of IOs' business

- Competitiveness and capacity to innovate: all operators in the independent aftermarket supply chain and its operators must maintain their capacity to innovate, develop their own business models and offer competitive services and products.
- Any telematics concept, such as Extended Vehicle, which allows VMs to monitor the data flow and thus profile and control IOs' businesses is totally unacceptable.
- IOs businesses must not be made dependent on their competitors!

Key prerequisites for a competitive Aftermarket

3. Free choice for consumers and data privacy

- The consumer must be able to select and control applications from certified service providers via the in-vehicle ‘Human-Machine-Interface’ (e.g. in-vehicle screen).
- The consumer must be able to choose services from different service providers in a non-discriminatory way.
- Data privacy to be ensured, through compliance with legislative requirements.
- New services must be safe and secure, following the methodology of common criteria. e.g. ISO/IEC 15408 and ISO/IEC 18045

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The VMs' Extended Vehicle (ExVe) concept

The VM Extended Vehicle (ExVe) Concept

High level description

VM telematics system

VM Server

Independent Operators

DATA

DATA

ACCESS

VM applications

Access to data and/or information

Market dominance over the entire value chain through control of the access and the data by the VM

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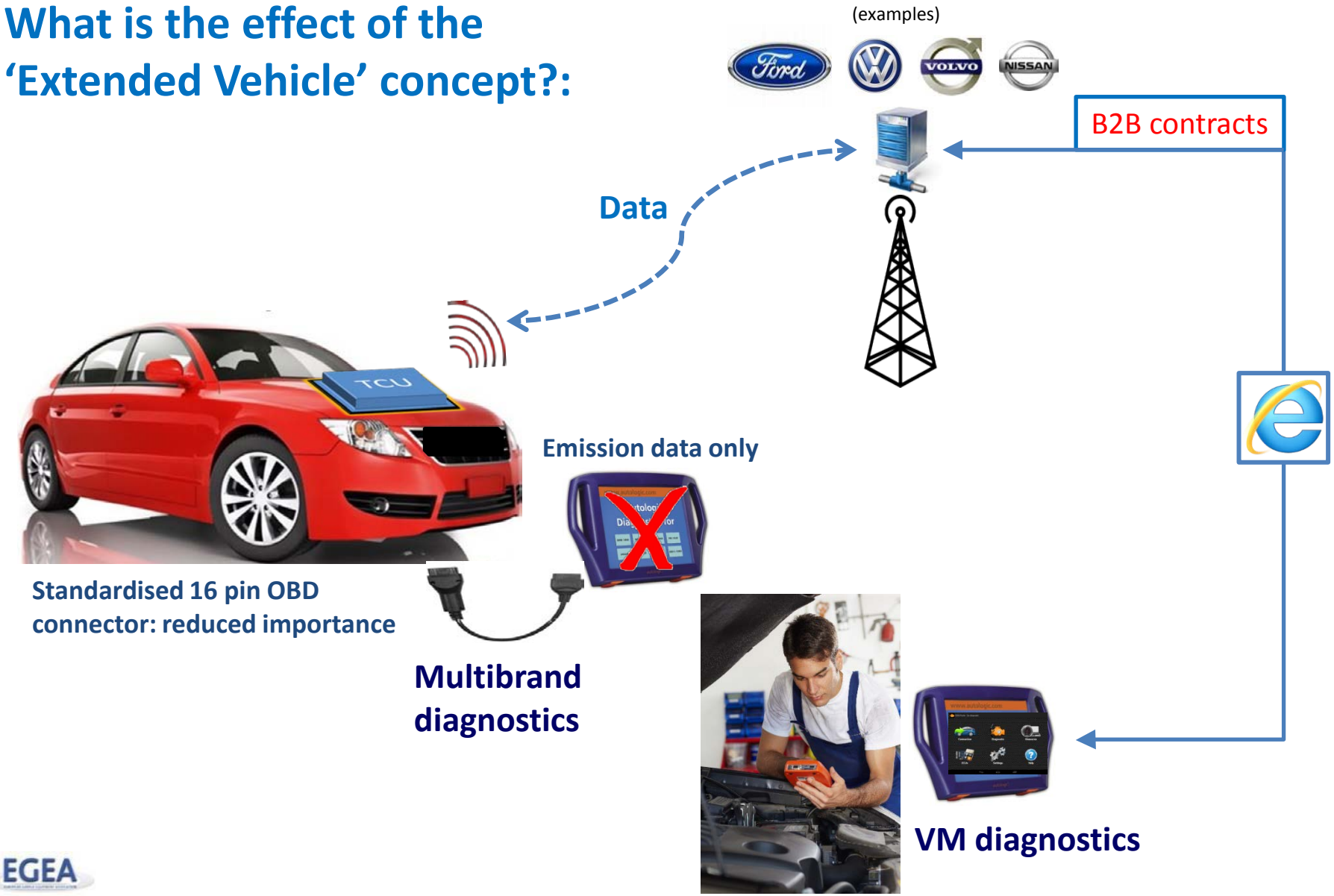
ExVe – in practice

What is the effect of the ‘Extended Vehicle’ concept?:



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The VM Extended Vehicle (ExVe) Concept - Analysis

Technical description

- All data runs over the VM web-server; VM controls all data flow and access.
- Non-standardised in-vehicle telematics systems with proprietary processing and computing functions

Consequences for functionalities and services

✓	**Low set-up effort** (attention: all IOs will become dependent on arbitrary B2B contracts)
✗	**Real-time in-vehicle data**: No direct access & not suitable for ITS or other time critical in-vehicle functions (no V2V or V2X)
✗	**Format**: Only 're-packaging' of **non-standardised** VM datasets and VM business models
✗	**Data**: restricted by VM (data and information that VMs choose to release) No direct data access for authorities/agencies (e.g. environmental compliance monitoring)
✗	**Monitoring:** VM controls all data flow: profiling of IOs businesses.
✗	**Functionality:** restricted to VM approved functions according to VM policy/business models • Diagnosis – restricted to VMs' processes only • New services restricted, e.g. independent insurance ('pay as you drive'), fleet management… • In-use emission testing compromised – e.g. access via VM server (conflict of interest)
✗	**'Non-discrimination':** No control that IOs get the same data as the VMs (VMs can bypass the data flow and reserve more data for themselves for additional service options)

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The VM Extended Vehicle (ExVe) Concept - Analysis

Consequences for independent operators
✓ Available immediately
✗ IOs lose the capacity to innovate and implement their own business models - detrimental to consumer choice
✗ Consumers 'locked-in' to VM selected partner services
✗ Monitoring and profiling by the VM of the entire IO value chain
✗ IO business model becomes controlled by B2B contracts 'granted' (or not) by VMs (conflict of interest, negative experience with Euro 5 & 6 - see Ricardo report)
✗ Development of new services dependent on VM consent
✗ Diagnostic test equipment manufacturers face being driven out of business

AFCAR solution

Interoperable Telematics Platform

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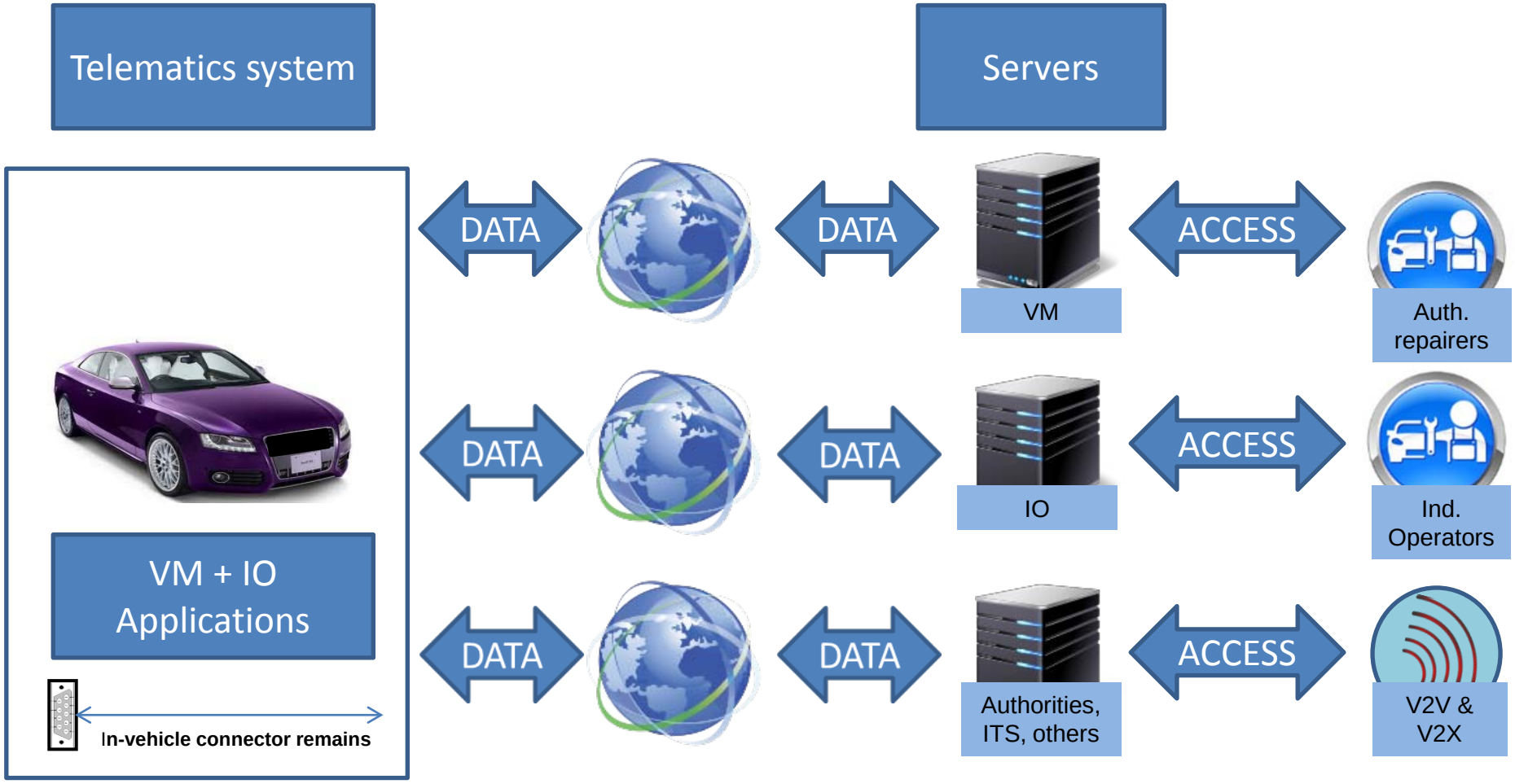
The Interoperable in-vehicle Telematics Platform

High level description



Equal opportunities for all stakeholders

The Interoperable Platform concept - Analysis

Technical description

- In-vehicle standardised telematics platform that supports communication to and from the vehicle with (multiple) remote service providers, as selected by the vehicle owner or driver.
- Supports embedded and external applications that allow an exchange of real-time vehicle data or information for a range of consumer selected services using a standardised in-vehicle API.
- Interfaces with the in-vehicle HMI to provide the ability to select the application and exchange data and information with remote service providers.
- Includes appropriate security functions to support the secure communication between the vehicle and remote service providers, as well as the secure implementation of applications within the vehicle.

The Interoperable Platform concept - Analysis

Consequences for services providers
✓ IOs maintain direct and real-time access to in-vehicle data (no latencies).
✓ IOs business is not directly monitored by the OEM.
✓ Vehicle driver can select and control the application of his choice via the in-vehicle HMI.
✓ Potentially the same level of access to in-vehicle data as the VM uses to provide services.
✓ Direct access to unprocessed data which allows development of own IO business model and innovative services.
✓ Consumer choice.
✓ Wider possible access for agencies and authorities.
✓ Highest level of security and safety control and multi-functionality.
✗ OEM's could still control in-vehicle access via the gateway credentials.

Proposed interim solution

Overview: Possible Interim Solution

Shared server

Provides un-monitored equal access to the same data in the same timescale, but limits competitive aftermarket services.

In-vehicle standardised hardware interface (“OBD plus”)

Provides un-monitored equal access to the same data in the same timescale and the ability to support greater competitive consumer choice.

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The Shared Server concept (abstract)

High level description

VM telematics system

VM applications

DATA

DATA

Shared Server (VM/IOs) controlled by stakeholder consortium

Shared Server (run by mutually acceptable third party operator e.g. SAP, IBM)

ACCESS

ACCESS

Independent Operators*

Access to data and/or information

VMs

*(and authorities and other legitimate parties…)

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Shared Server Concept – Analysis

Technical description

- **Each** VM and the IOs share a common server controlled by mutually acceptable third party operator (e.g. SAP, IBM)
- Basic principles for business model must be established (parallels in other industry sectors)
- The costs of the server would be directly and proportionately allocated to the data traffic used by each application

Consequences for functionalities and services

✓ **Data:** VMs and IOs make use of the same data for developing services (to be commonly defined). Provision and operation of the server by a trusted 3rd party, ensuring equal access to the same vehicle data in the same timescale.

✓ **Monitoring:** No monitoring/profiling of IO business activities.

✓ **Control:** Due to the commonly shared server, it can be ensured that VMs do not bypass the system to obtain undue data advantages ('non-discrimination').

✓ (Retro-) access to remote services for the currently connected fleet.

✗ **Set-up effort**: high

✗ **Real-time in-vehicle data**: No direct access

✗ Slow (latencies) = Not suitable for time-critical operations (like ITS, diagnostics etc.)

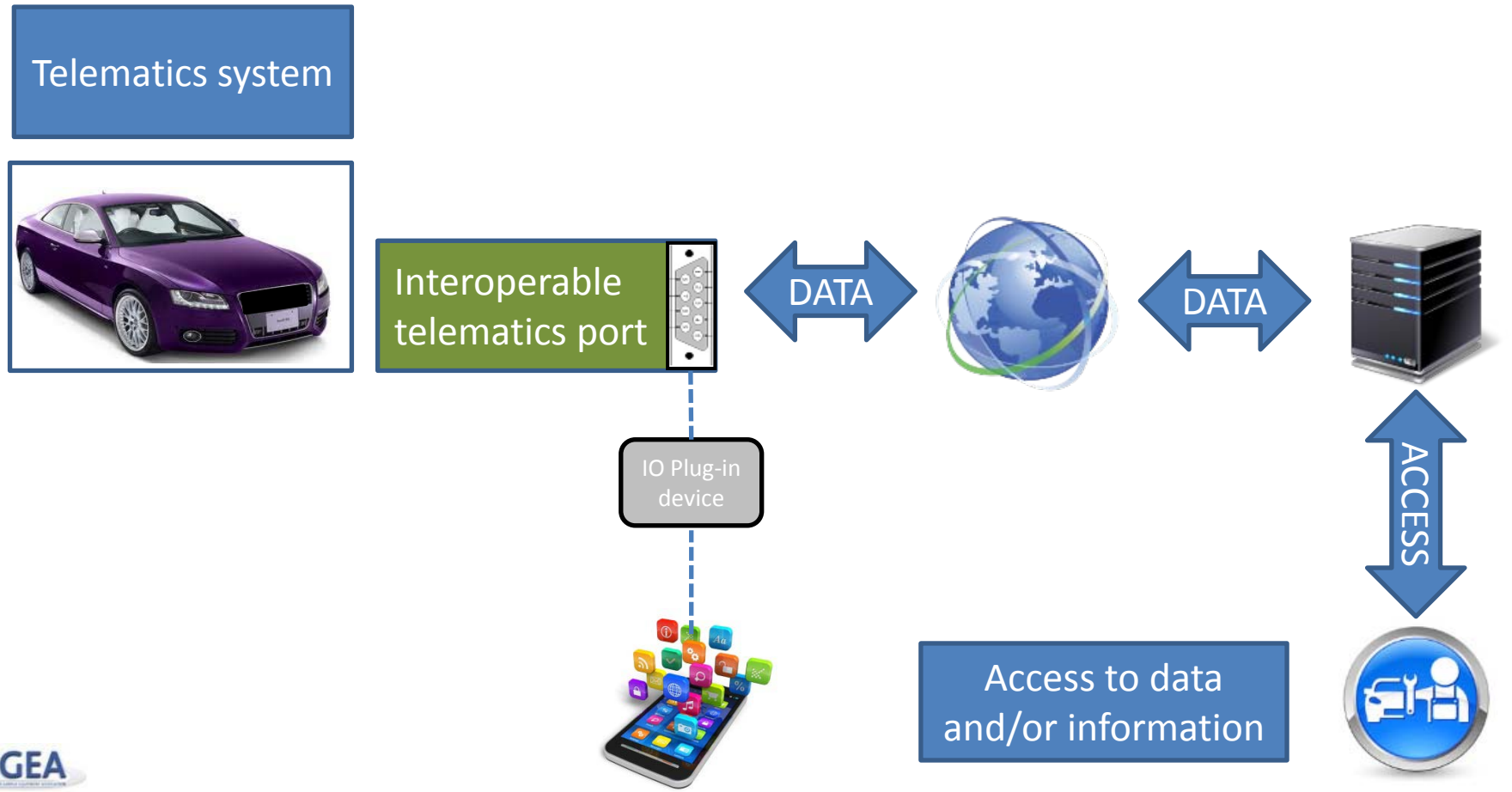
Shared Server Concept – Analysis

Consequences for independent operators

X	Limited functionality and services due to VM chosen datasets
X	No direct access to real-time in-vehicle data (major aftermarket operators loses their capacity to innovate)
X	Diagnostic test equipment manufacturers face being driven out of business
X	Development of new services dependent on VM consent

In-vehicle Interoperable Telematics Port

High level description



In-vehicle interoperable telematics port - Analysis

Technical description

- Legally mandated port (connector) to the vehicle (in-vehicle standardised hardware interface)
- IOs would thus be given the possibility to connect their own aftermarket plug-in telematics device
- The plug-in device is connected to the connector which can support the implementation of applications that allow the exchange of in-vehicle data. (existing 16 pin connection/functionality must remain until an alternative standardised interface is implemented)

Consequences for functionalities and services

✓ A unified/standardised hardware interface would allow independent operators the same access to real-time in-vehicle data, functionalities & ECUs as the VM. Thus, custom telematics based services can be developed by IO-partners.

✓ Safety is ensured by the VM implemented Unified Port Security Layer as well as tests of the application prior to release.

✓ **Independence and innovation capacity:** ensured.

✓ Fully in line with **ITS implementation plan Rec. 2** (*"standardised and mandatory interface - "ITS connector")*

✓ Retrofit solution for vehicles equipped in the near future with eCall/telematics functionalities.

✗ Smart phone based solution (not as 'acceptable' as VM in-vehicle HMI)

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3. In-vehicle interoperable telematics port - Analysis

Consequences for independent operators
✓ IOs maintain direct and real-time access to in-vehicle data.
✓ Smart phone based control (should be mirrored to the in-vehicle display to allow driver selection and control and minimise driver distraction).
✓ Non-monitored business models.
✓ Direct access to real-time in-vehicle data (without latencies).
✓ Maintain direct access to unprocessed data which allow development of own IO business model and innovative services.
✓ Greater consumer choice…
✗ … but with service limitations compared with an in-vehicle platform.
✗ Additional costs and (physical) limitations.

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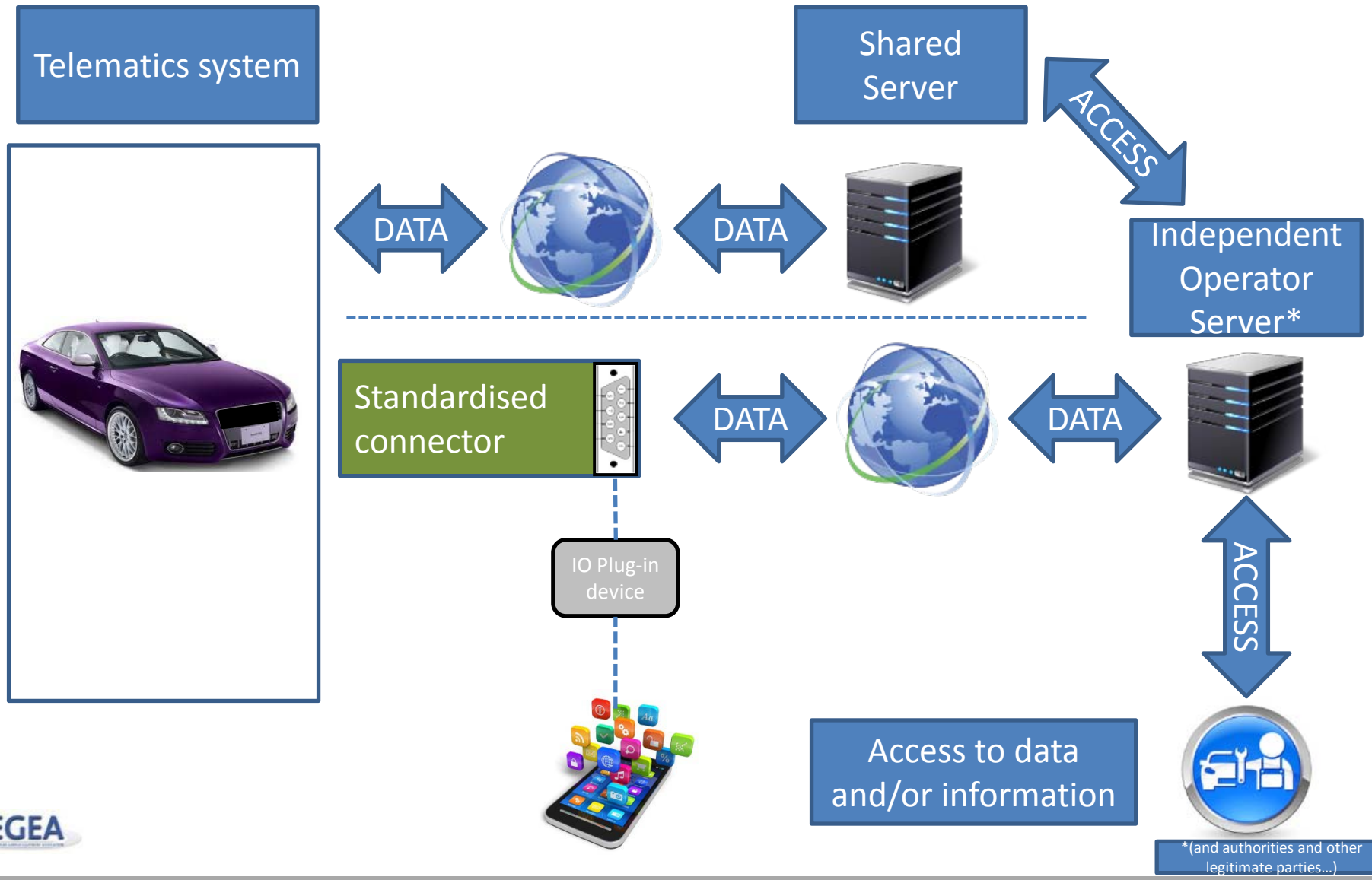
AFCAR combined interim solution

High level description: Shared server + in-vehicle connector



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REMINDER - AFCAR solution

Interoperable Telematics Platform

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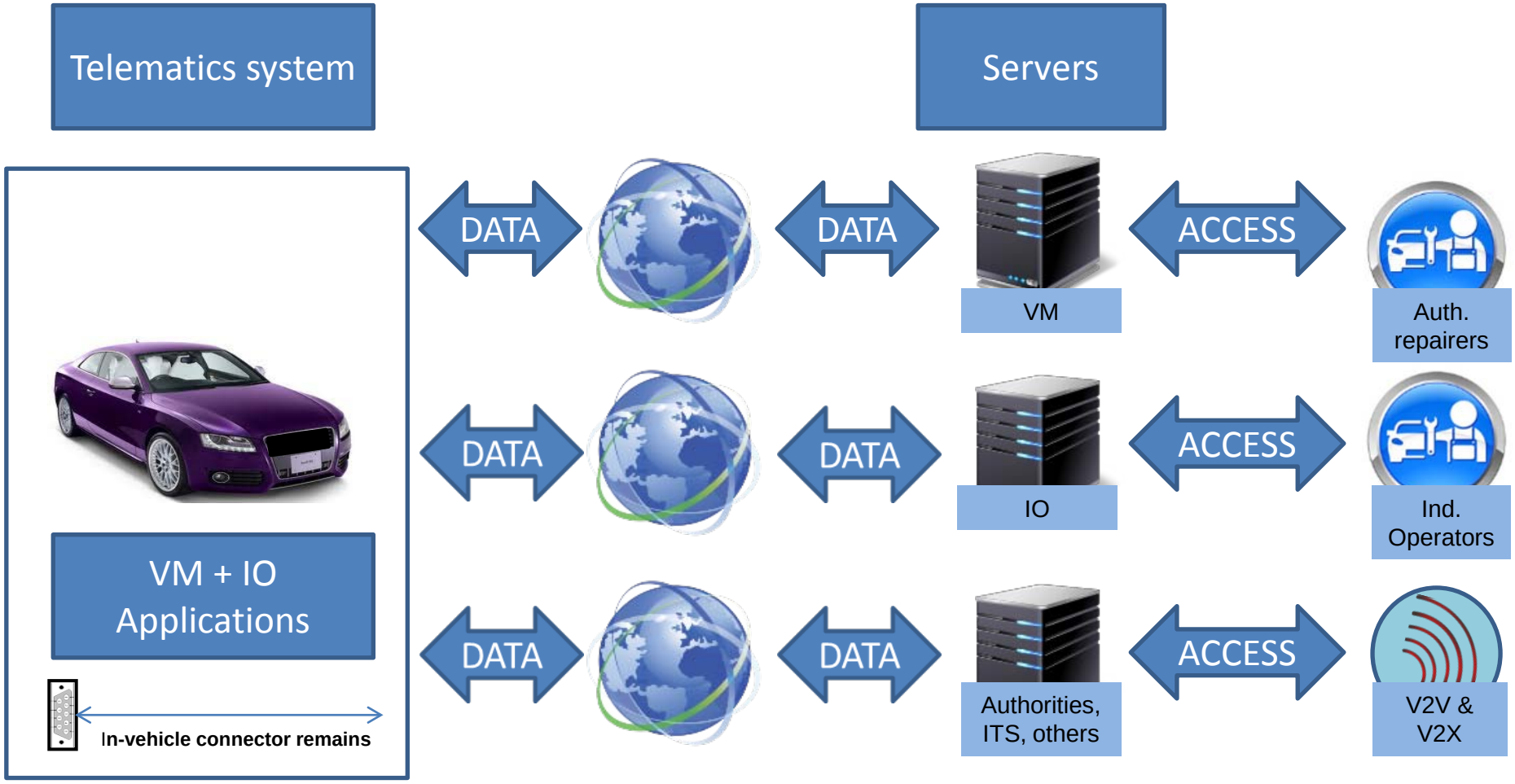
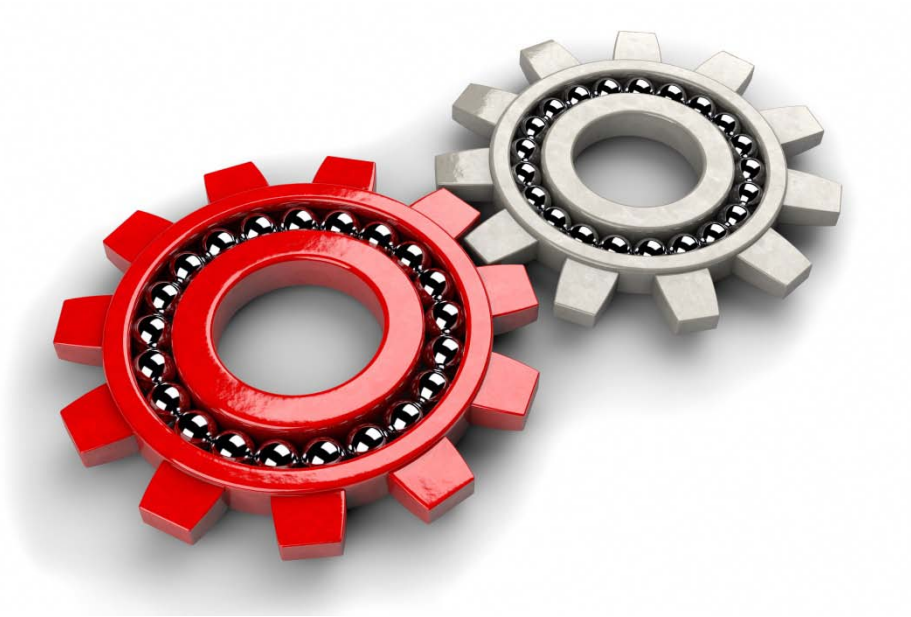
The Interoperable In-Vehicle Telematics Platform

High level description



Equal opportunities for all stakeholders

C-ITS forum: requirements for interoperability

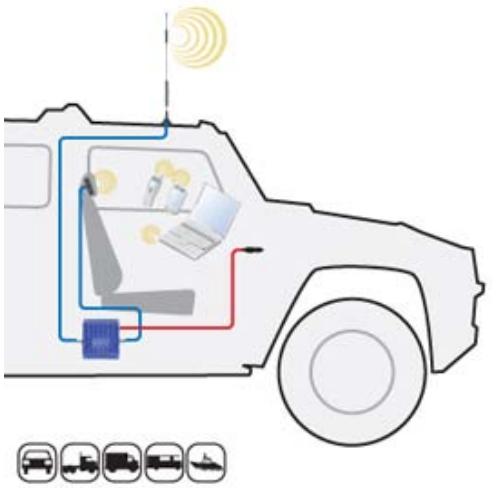


What has been agreed in Brussels so far?

The European Parliament adopted its official position on the eCall Regulation in February 2014.

The amendment adopted (Art.10a par.2) gives a mandate to the Commission to draft a legislative proposal on "*the technical requirements for an interoperable, standardised, secure and open-access platform*", once the eCall legislation is adopted (= 2015 as forecast)

This amendment has now become part of the 'Co-operative Intelligent Transport System' (C-ITS) forum.



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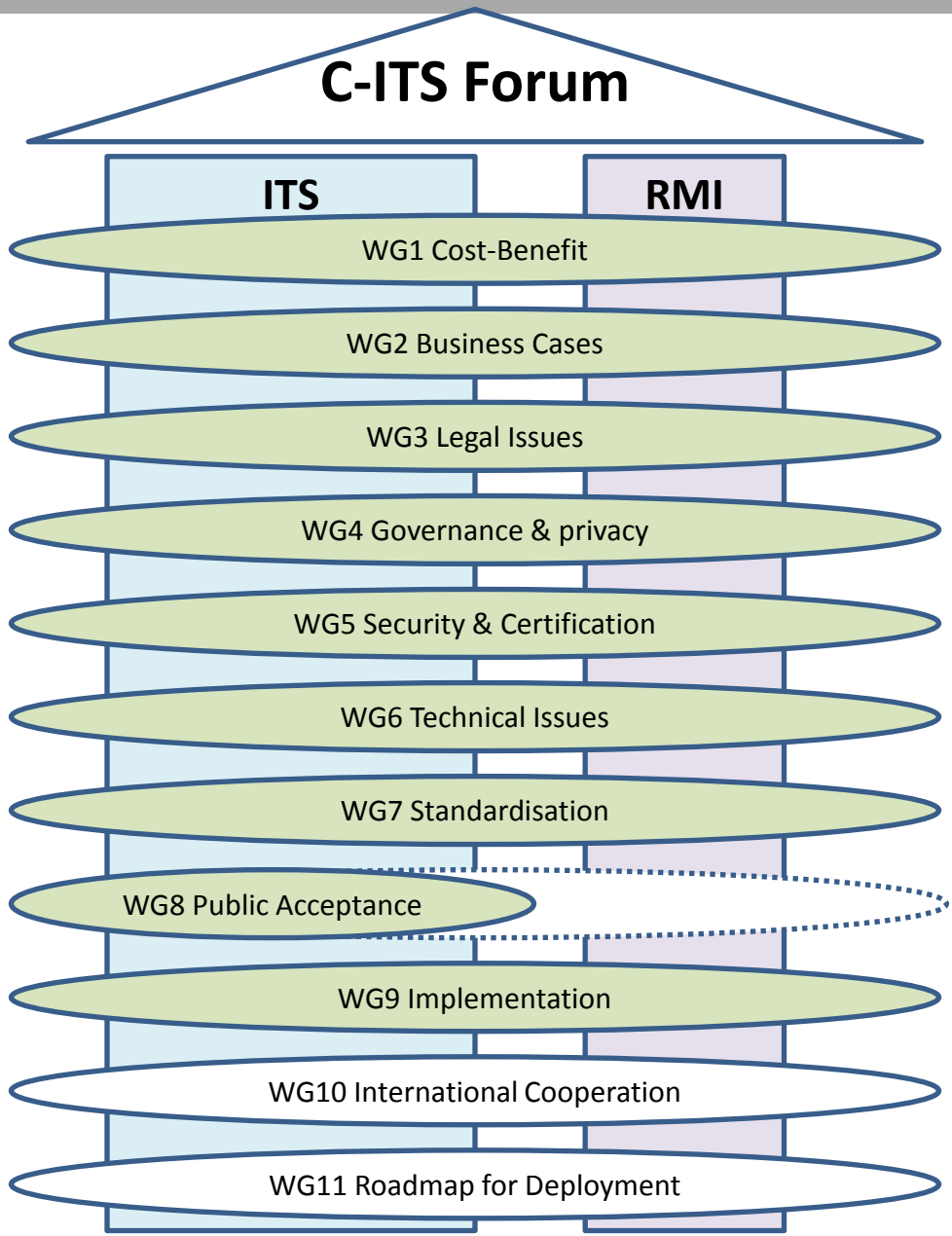
The wrestle about technical solutions

The forum is a combination of EC officials (DG Move Chair), but is mainly experts from a wide range of stakeholders, including VMs, Member States, AFCAR members, alliance partners (e.g. CLEPA, insurance Europe, Lease Europe) and others who support our position (e.g. road authorities), but also many who oppose it…….

- The time schedule is 14 months (Nov 2014 > 2015), with 2 day meetings every month.
- The forum is attempting to create an agreement concerning the requirements of ITS, whilst including the requirements of the in-vehicle platform for 3rd party services.
- The forum should agree a framework description for the functionality, from which detailed technical requirements will be discussed. The legal basis has yet to be agreed.

C-ITS Forum Structure



Aftermarket participants

ADAC(?)/IRU(?)

GDV/FIA

Insurance Europe

FIGIEFA/EGEA/FIA/CLEPA

CECRA/CLEPA

FIGIEFA/EGEA/FIA/CLEPA/
Insurance Europe

CECRA

FIA

FIA

EGEA

Thank you!

PTI

CITA ECSS Study

CITA ECSS study

- The study final report finished at the end of July and was sent to the Commission on 12th September.
- The European Commission formally accepted the report and presented it officially at the last RTWG meeting in October.
- CITA & EGEA presented the ECSS study report during the Roadworthiness Committee in last November.
- The study proposes “functionality testing” of the ECSS systems (except SRS) by controlling the various parts and components of the ECSS systems and verifying the results on other PTI test equipment (brake tester, headlamp tester).
- ACEA challenged the “functionality test” as being too risky and proposed to replace it with the German test concept (based on FSD activities). This was challenged by EGEA as being insufficient and did not conform to ECSS study recommendations.

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CITA ECSS study – footnotes

- During the RTWG meetings, a series of ‘footnotes’ were added to the non-paper to define the requirements for the VMs to ensure that the technical information required is provided in detail and in a format that can be easily used.
- This could not be discussed during the last meeting and the corresponding footnote n°24 was not discussed nor agreed.
- Now that the ECSS study report is finalised, the next step will be to define the technical information requirements that will define what must be provided by the vehicle manufacturers, especially footnote n°24 of the non-paper.
- We were invited to participate in a meeting with CITA & ACEA. ACEA proposed drafting an impact assessment for each footnote for presentation to the Member States.

CITA ECSS study – footnotes

24a Predefined system function/ efficacy test methods

This footnote may need to be used should agreement be reached on future changes to test methods!

- Vehicle-specific specification of reliable and correct (on-board or off-board) test methods suitable to verify the correct functioning of complete system/function1, including:
  - Short description of the test method (including threshold values) and the coverage of the test method
  - Specification of diagnostic sequences and used diagnostic services

  (e.g. Activation of brake force modulation axle1 left, readout value of brake pressure sensor, …)

  ➡ *Suitable, standardized formats are available: ODX diagnostic-layer-container for specification of diagnostic-services and OTX for specification of the diagnostic sequence of the test method*

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PTI -
Update on national legislation (implementation of the PTI Directive in particular regarding emissions testing)

PTI – National Feedback: Italy

Italy

- **Update MCTCNet 2 has started**
- **It will be completed 31.12.2015**
- **Necessary to ensure secure data transmission and data storage**
- **Additional use of a video camera is necessary to identify vehicle by plate image and confirm the presence on a brake tester**
- **Study on new Spec. for Smokemeter with higher resolution and introducing a Scan Tool test is suspended at this moment**
- **New smokemeter/scatterd light on hold at this moment**

PTI – National Feedback: UK

UK

- **Department of transport -> OBD only – especially for Diesel**
- **DVSA see problems with OBD only**
- **Continuing with tailpipe testing??**

PTI – National Feedback: Germany

Germany

- **New legislation 01.06.2015 – Leitfaden 5**
- **Major changes:**
  - Further two steps procedure (OBD – emission)
  - WWH-OBD
  - Only one acceleration (Diesel) if value is 30 % below plate value
  - Leitfaden 5 has to be executed on Euro 6 and Euro VI vehicles
- **Revision clause 2018 (Euro VI) / 2019 (Euro 6)**
  VM´s are doing all to establish 2020 onwards OBD only

PTI – National Feedback: Germany

Germany

Interesting:

- **During last revision meeting at Ministry of transport, FSD made a proposal to check manipulated DPF´s via the HU-adapter**

Statement:

- **With actual methods it´s not possible to detect manipulated particle traps**

Also interesting:

- **Discussion at PTB (Regelermittlungsausschuss) to create an new class of calibration (restricted values)**

PTI – National Feedback: France

France

- **OTC-LAN mid of 2015**
- **Diesel procedure with RPM for triggering acceleration**
- **Lowest opacimter value 0,1 m-1 / reference filter 10 % / resolution 0,001**
- **Under discussion measuring of other gasous components**
- **Discussion particulate emission on brakes**

PTI – National Feedback: Spain

Sweden

- **Depending on Readiness codes and fault codes emission test or OBD only**

PTI – National Feedback: Spain

Spain

- **No member present**

PTI – National Feedback: Netherlands

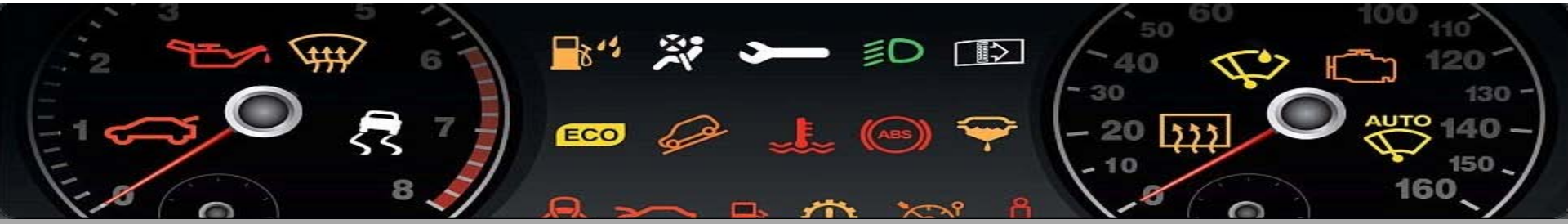
Netherland

- **Euro 5/6 OBD on passenger cars**
- **Trucks tailpipe test**
- **Brake test on agricultural vehicles end of 2015**

CITA SET study – Georges Petelet

Counterfeiting & Product piracy

(item not being discussed due to lack of time)



Counterfeiting & Product piracy

Feedback on the telco organised with some EGEA members in December 2014:

Background:

- There has been an increasing issue of counterfeit diagnostic products (both hardware and software) entering the market for some of the leading test equipment manufacturers.

- The effect has been to distort the market to the detriment of existing official distributors, but also to end user customers who thought that they were buying genuine products.

Counterfeiting & Product piracy

Direct examples:

- One member has experienced copied products being manufactured in China and have pursued their legal processes to prosecute the offenders over the last 2 years. However, due to the low level of penalties imposed, even after a successful conviction, this has not stopped the problem.
  In key markets, the impact has been to lose significant sales value as well as customer goodwill.

- Another member has experienced similar problems but has not yet been able to undertake legal action

- Other examples from WG2 members?

Counterfeiting & Product piracy

Technical prevention measures:

- One members has tried a number of technical solutions to control this problem, including:
  - Using web tools to block malicious websites, APPs etc.
  - Dongles for passwords/controlled functions.
  - Updates with embedded security software (but these were 'cracked').

- Another member has engineered both hardware and software security.

- Other technical prevention measures possible?

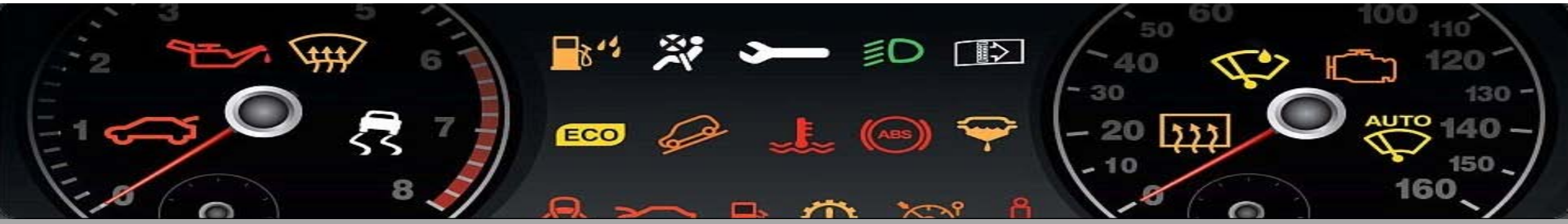
Counterfeiting & Product piracy

Next steps:

In order to investigate what can be done at the European level as well as at national level, the Secretariat needs to know:

- which problems of counterfeiting you encounter (detailed list of examples);
- in which countries the goods are manufactured;
- in which countries the goods are sold/marketed;
- is the Internet an important selling platform for these goods;
- are your products legally protected (national patent and/or EU patent and/or utility model for the hardware ; trademark ; copyright on software ; design right on the whole product).

Election of a new chairman



Any other business

EGEA

EUROPEAN GARAGE EQUIPMENT ASSOCIATION

Thank you!